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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Richard Mark Schwartz

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VERIZON

PATENT MANAGEMENT GROUP

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EXAMINER

OPSASNICK, MICHAEL N

ART UNIT

PAPER NUMBER

2626

NOTIFICATION DATE

DELIVERY MODE

08/17/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/656,264	Applicant(s) SCHWARTZ ET AL.	
	Examiner Michael N. Opsasnick	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/12/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) 5,31-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-30,53-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,2,4,6-9,11-17,20-25,27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta (6122361) in view of Kahn (6122614) in further view of Cox et al (6754326).

As per claims 1,17,21,29,30, Gupta (6122361) teaches an automated directory assistance system (abstract) comprising:

“a speech recognition module.....audible request” as generating scripts from input speech (col. 6 lines 35-50);

“a listing retrieval module.....transcript” as generating a list → fig. 3, subblocks 404-406;

“an accept/reject module.....caller” as reworking the list (Fig. 3, subblock 416) and selecting the top 3 candidates (Fig. 3, subblock 418).

Although Gupta (6122361) teaches generating a list, Gupta (6122361) does not explicitly teach generating a transcript; however, Kahn (6122614) teaches the operator generating transcripts of the user input (Kahn (6122614), col. 8 lines 20-40). Therefore, it would have been obvious to one of ordinary skill in the art of operator system based services at the time the invention was made to modify the teachings of Gupta with operator based transcriptions because it would advantageously allow for editing of unmatched speech (Kahn (6122614), col. 2 lines 50-60).

The combination of Gupta (6122361) in view of Kahn (6122614) teaches using the transcript (Gupta (6122361), Fig. 3, dotted arrow off of 402) coming from the utterance (Fig. 3, subblock 400)), however, does not explicitly teach storing the transcript to be used as a query; Sabourin et al (5987414) does not explicitly teach the database storing word previously included in requests for telephone numbers and using the stored information to make further judgments on the listing, however, Cox et al (6754326) teaches storing telephone information in a database, including operator assisted information (col. 7 lines 50-63; col. 8 lines 17-34). Therefore, it would have been obvious to one of ordinary skill in the art of directory assistance to modify the combination of Gupta (6122361) in view of Kahn (6122614) with storage of telephone call assistance information because it would advantageously allow for the directory assistant to tailor subsequent assistance to be more effective (Cox et al (6754326), col. 7 lines 63-67).

As per claim 2, Gupta (6122361) teaches a large speech recognizer (col. 8 lines 11-15);

As per claims 4,11,25, Gupta (6122361) teaches the use of probability statistics (col. 2 lines 28-32).

As per claims 6,22, Gupta (6122361) teaches reordering and ranking (Fig. 3, subblock 416).

As per claims 7,12,23,27, Gupta (6122361) teaches acceptance/rejection based on a recognized word from the listing (fig. 2).

As per claims 8,24,28, Gupta (6122361) teaches transference to a human operator upon rejection (col. 8 line 65 – col. 9 line 3).

As per claim 9, Gupta (6122361) teaches a training system to configure the recognition modules as using orthographies that are configured/trained by certain utterances based on geography (col. 2 line 6-25) or as a first pass search (col. 2 lines 45-50, and col. 12 lines 38-44).

As per claim 13, Gupta (6122361) teaches generating transcripts based upon a priori probabilities and histograms (Fig. 3, subblocks 408,412).

As per claim 14, Gupta (6122361) teaches creating loose grammars and training the transcript according to the grammar (col. 2, lines 28-32; Gupta (6122361) teaches a three layer dictionary comprising a first layer recognition process performing a rough calculation (col. 7 lines 34-44), and second layer rescoring stage (col. 7 lines 45-59), and a third final decision scoring stage (col. 7 lines 58-67). Examiner takes Official Notice that the multiple layer grammar of Gupta (6122361) can be construed as a loose grammar, i.e., the pass that is a “rough estimate” is equivalent to a “loose grammar” (Evidence to the Official Notice can be found in Martin (5642519), col. 25 lines 1-11, showing a multipass grammar system wherein a less accurate pass is known as a “loose” grammar).)

As per claim 15, Gupta (6122361) teaches acceptance/rejection based upon recognition (fig. 2).

As per claim 16, Gupta (6122361) teaches a verification/correction module to a human for verification (col. 8 line 60 - col. 9 line 3).

As per claim 20, Gupta (6122361) teaches identifying words and telephone numbers (col. 10 lines 1-11).

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3. Claims 3,10,18,19,26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta (6122361) in view of Junqua et al (5799065) in view of Kahn (6122614) in further view of Cox et al (6754326).

As per claims 3,10,18,19,26, Gupta (6122361) teaches using acoustics and grammar models (col. 2 lines 28-32).

As per claims 1,17,21,29,30, Gupta (6122361) teaches an automated directory assistance system (abstract) comprising:

“a speech recognition module.....audible request” as generating scripts from input speech (col. 6 lines 35-50);

“a listing retrieval module.....transcript” as generating a list → fig. 3, subblocks 404-406;

“an accept/reject module.....caller” as reworking the list (Fig. 3, subblock 416) and selecting the top 3 candidates (Fig. 3, subblock 418).

Although Gupta (6122361) teaches using acoustics and grammar models (col. 2 lines 28-32), Gupta fails to detail n-gram grammar models; Junqua et al (5799065) teaches call recognition based upon loose grammars, grammar rules, and in particular, n-gram models (col. 7 line 60 – col. 8 line 15; to be used for call recognition, col. 3 lines 25-32). Therefore, it would have been obvious to one of ordinary skill in the art of automated directory assistance to modify the system as taught by Gupta (6122361) with a constrained grammar system tailored to detect/route recognized phone numbers because it would advantageously allow for the user to

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gain access to that particular number without having to touch-tone the person's name (Junqua et al (5799065), col. 1 lines 25-36).

The combination of Gupta (6122361) in view of Junqua et al (5799065) does not explicitly teach generating a transcript; however, Kahn (6122614) teaches the operator generating transcripts of the user input (Kahn (6122614), col. 8 lines 20-40). Therefore, it would have been obvious to one of ordinary skill in the art of operator system based services at the time the invention was made to modify the teachings of Gupta (6122361) in view of Junqua et al (5799065) with operator based transcriptions because it would advantageously allow for editing of unmatched speech (Kahn (6122614), col. 2 lines 50-60).

The combination of Gupta (6122361) in view of Junqua et al (5799065) in view of Kahn (6122614) teaches using the transcript (Gupta (6122361), Fig. 3, dotted arrow off of 402) coming from the utterance (Fig. 3, subblock 400)), however, does not explicitly teach storing the transcript to be used as a query; however, Cox et al (6754326) teaches storing telephone information in a database, including operator assisted information (col. 7 lines 50-63; col. 8 lines 17-34). Therefore, it would have been obvious to one of ordinary skill in the art of directory assistance to modify the combination of Gupta (6122361) in view of Junqua et al (5799065) in view of Kahn (6122614) with storage of telephone call assistance information because it would advantageously allow for the directory assistant to tailor subsequent assistance to be more effective (Cox et al (6754326), col. 7 lines 63-67).

4. Claims 53,55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sabourin et al (5987414) in view of Cox et al (6754326).

As per claim 53, Sabourin et al (5987414) teaches a method providing directory assistance (col. 1 lines 1-15) comprising receiving a request for a telephone number from a caller, spoken by the caller, including a location and listing (col. 5 lines 42-49); using large vocabulary speech recognition to recognize at least one word spoken by the caller when making the request (col. 5 lines 50-55); generating a transcript from the at least one word and using statistical information retrieval and the transcript to identify a listing corresponding to the recognized word, including using the transcript as a query into a listings database and determining whether the listing is likely to be correct (as converting the input speech request into vocal tract information and accessing the speech recognition dictionary/orthography – col. 5 lines 50-55, wherein the matching between the input speech and the orthographies are phonetically based – col. 5 lines 58-65 – and as such, teaches a transcription of the input speech to phonetic symbols (col. 12 lines 3-14), and furthermore, a link is established between a phonetic match and the listing itself – col. 6 lines 20-25, and using statistical information relating the speech recognition dictionary and the actual stored listings – col. 7 lines 9-19, and calculating probabilities if the listing is correct (col. 5 line 65 – col. 6 line 4); and providing a telephone number corresponding to the listing to the caller” as providing the telephone number of the desire entity (col. 6 lines 43-45).

As per claim 55, the claim limitations that are similar in scope and content to the claim limitations of claim 53 are rejected using the Sabourin et al (5987414) reference as applied above to claim 53. Furthermore, as per claim 55, Sabourin et al (5987414) also teaches defining a set of words or phrases associated with a listing (col. 10 lines 15 – 40; especially the surname; and as an example, using the profession of the group to further separate the possible matches – col.

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11 lines 1-42). Sabourin et al (5987414) also teaches matching the spoken surname with the listing (col. 11 line 60 – col. 12 line3), and if there is no plausible match, rejecting the listing and reverting to a live operator – col. 3 lines 52-67).

As per claims 53,55, Sabourin et al (5987414) does not explicitly teach the database storing word previously included in requests for telephone numbers and using the stored information to make further judgments on the listing, however, Cox et al (6754326) teaches storing telephone information in a database, including operator assisted information (col. 7 lines 50-63; col. 8 lines 17-34). Therefore, it would have been obvious to one of ordinary skill in the art of directory assistance to modify Sabourin et al (5987414) with storage of telephone call assistance information because it would advantageously allow for the directory assistant to tailor subsequent assistance to be more effective (Cox et al (6754326), col. 7 lines 63-67).

5. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sabourin et al (5987414) in view of Cox et al (6754326) in further view of Daudelin (4959855).

As per claim 54, Sabourin et al (5987414) teaches a method providing directory assistance (col. 1 lines 1-15) comprising receiving a request for a telephone number from a caller, spoken by the caller, including a location and listing (col. 5 lines 42-49); using large vocabulary speech recognition to recognize at least one word spoken by the caller when making the request (col. 5 lines 50-55); generating a transcript from the at least one word and using statistical information retrieval and the transcript to identify a listing corresponding to the recognized word, including using the transcript as a query into a listings database and determining whether the listing is likely to be correct (as converting the input speech request into

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vocal tract information and accessing the speech recognition dictionary/orthography – col. 5 lines 50-55, wherein the matching between the input speech and the orthographies are phonetically based – col. 5 lines 58-65 – and as such, teaches a transcription of the input speech to phonetic symbols (col. 12 lines 3-14), and furthermore, a link is established between a phonetic match and the listing itself – col. 6 lines 20-25, and using statistical information relating the speech recognition dictionary and the actual stored listings – col. 7 lines 9-19, and calculating probabilities if the listing is correct (col. 5 line 65 – col. 6 line 4); and providing a telephone number corresponding to the listing to the caller” as providing the telephone number of the desire entity (col. 6 lines 43-45).

Sabourin et al (5987414) does not explicitly teach the database storing word previously included in requests for telephone numbers and using the stored information to make further judgments on the listing, however, Cox et al (6754326) teaches storing telephone information in a database, including operator assisted information (col. 7 lines 50-63; col. 8 lines 17-34). Therefore, it would have been obvious to one of ordinary skill in the art of directory assistance to modify Sabourin et al (5987414) with storage of telephone call assistance information because it would advantageously allow for the directory assistant to tailor subsequent assistance to be more effective (Cox et al (6754326), col. 7 lines 63-67).

Sabourin et al (5987414) in view of Cox et al (6754326) does not explicitly teach connecting the call to the corresponding listing, however, Daudelin (4959855) teaches automatic connection of the call after the listing is required (col. 1 lines 2-10). Therefore, it would have been obvious to one of ordinary skill in the art of directory assistance to modify the teachings of Sabourin et al (5987414) in view of Cox et al (6754326) with automatic connection of the call

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corresponding to the listing because it would advantageously save the customer from having to re-dial the listed number (Daudelin (4959855), col. 2 lines 4-8).

Response to Arguments

6. Applicant's arguments filed 6/4/07 have been fully considered but they are moot in view of the new grounds of rejection (the introduction of the Cox reference to address the new claim limitations).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see related art listed on the PTO-892 form.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

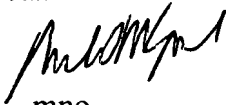
CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL OPSASNICK
PRIMARY EXAMINER



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